



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

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SECRETARY

**North Carolina Board of Transportation  
Environmental Planning and Policy Committee  
Meeting Minutes for June 6, 2007**

A meeting of the Environmental Planning and Policy Committee (EPPC) was held June 6, 2007 at 8:40 AM in the Board Room (Room 150) of the Transportation Building. Board Member Nina Szlosberg chaired the meeting. Other Board of Transportation members that attended were:

Tom Betts  
Conrad Burrell  
Bob Collier

Doug Galyon  
Arnold Lakey

Cam McRae  
Nancy Dunn

Other attendees included:

Julie Hunkins  
Andy McDaniel  
Beth Leonard McKay  
Ricky Green  
Wally Bowman  
John Sullivan  
Mike Bruff  
Clarence Coleman  
Greg Thorpe  
Tim Johnson  
Larry Goode  
Donna Dancausse  
Jason Robinson  
Mike Pettyjohn  
John Nance

Beth Neely  
Matt Lauffer  
Sarah Dambrose  
Lisa Glover  
Ehren Meister  
Dan Thomas  
Marisel Lopez Cruz  
Alan Clark  
Don Voelker  
Art McMillan  
Missy Dickens  
Sandy Nance  
Kevin Kline  
M.L. Holder  
Joel Setzer

Neil Lassiter  
Bill Gilmore  
Phil Harris  
Ken Pace  
Marcus Wilner  
Jennifer Garifo  
Robin Smith  
Rich Gannon  
Mike Mills  
Don Lee  
Debbie Barbour  
Pat Ivey  
Barry Moose  
Jay Swain  
Marshall Dobson  
Coleen Sullins

Ms. Szlosberg called the meeting to order at 8:43 AM. She opened by accepting a motion to approve the meeting minutes from the May 2, 2007 committee meeting. The minutes were approved as presented.

Ms. Szlosberg introduced the first agenda item -- the Jordan Lake Nutrient Strategy Rules. She reminded the committee that at last month's meeting we had a presentation on the rules, and that these rules are currently under consideration by the legislature because of heavy nutrient loading on the lake. She indicated that the legislature, DENR, and other agencies are working together to find a strategy to improve water quality and save the water quality of the lake. She explained that at the last meeting we received an update from DOT's staff concerning how these rules might be implemented and what their effect might be on the department. Chairman Galyon supported the motion to have the staff to continue the conversation about the rules with DENR. As such, NCDOT staff was present to give an update on where we are on those discussions.

Ms. Szlosberg introduced Greg Thorpe, Manager of the Project Development and Environmental Analysis Branch.

Mr. Thorpe began by stating that there are some concerns about the rules that make up the body of the nutrient management strategy. There are three rules in particular with which NCDOT has concerns. Some of those are technical concerns -- things that we believe can be resolved with additional conversations with DWQ. Some the concerns that we have are related to the stakeholder process that was used in developing the rules. Mr. Thorpe recalled that at the last EPPC meeting DENR stated that the development of the stakeholder process of the nutrient management strategy was well underway before NCDOT was invited to the table. NCDOT has expressed that concern, and DWQ has acknowledged that oversight, and ultimately did invite us to the table.

Once we became aware of the rules and began expressing our concerns, we began meeting with DWQ to have discussions. In fairness to DWQ, throughout the course of those conversations, DWQ has made changes to the rules. But there are still fundamental differences between how we view the necessity of the rules and how those rules are implemented.

Part of our problem with the rules is there was no effort early on to quantify NCDOT's nutrient load contribution to the Jordan Lake Watershed before the proposed rules were developed. It was after the rules were written and work began on the fiscal note that DWQ engaged NCDOT, asking for assistance in quantifying our nutrient loading range. Our nutrient loading numbers were needed to balance the loading spreadsheets for purposes of developing the fiscal analysis. NCDOT did assist DWQ in quantifying those nutrient loading rates based on published scientific studies conducted by UNC Charlotte, as part of the NCDOT National Pollutant Discharge Elimination System (NPDES) program, and the federal NPDES stormwater permit.

Mr. Thorpe then showed some slides to help make some points. He stated that in response to some of the concerns expressed by our staff, DWQ made changes to the rules in September 2006. One of the changes was that nutrient loading targets were dropped from the rule for controlling stormwater run-off on existing development. As a result, NCDOT would have to make a percentage reduction. The challenge is that in some areas of the Jordan Lake Watershed, NCDOT's loading rates are so low to begin with, making nutrient reduction technically difficult and not cost effective.

Mr. Galyon interjected and stated that he would like some clarification about loading rates.

Mr. Thorpe responded that if you are undertaking an activity such as putting fertilizer on a crop, or a lawn, and the loading rate or the amount of nitrogen coming off an acre of that land is on the order of 20 pounds per acre, and you have to do a 35% reduction; it is not too difficult to develop controls that help obtain a reduction of 35% to achieve a loading of about 14 pounds per acre. On the other hand, say you have an initial loading rate of about 7 pounds per acre per year; it is much more difficult to reduce that 7 pounds per acre by 35% (equivalent to a loading rate of about 4.6 pounds per acre) because you are starting with a substantially lower initial loading rate. It's much more technically difficult to get that reduction when you start out with a small initial loading since the concentration is essentially much lower.

Mr. Galyon stated that the required reduction is not in relation to the amount that you produce. In other words for 20 pounds per acre you still have to reduce by 35%. NCDOT's roadways are only producing 3.8 percent, and we still have to reduce by 35%. Mr. Thorpe indicated that Mr. Galyon was correct.

Mr. Thorpe continued. The reason it affects our cost so dramatically is that our estimated cost is based on a thirty year projected cost. Our projected cost prior to that the change being made in September 2006 was on the order of \$100 million for the 30-year period. We estimate that in order to produce the suggested reduction, we have to spend on the order of \$700 million. The reason it's so much more expensive doing it that way, is that we would have to put in numerous Best Management Practices (BMP's) in the drainage areas that go to our outfalls or onto our highways. To put in these controls in all those outfalls will become very expensive.

DWQ has made suggestions for other ways we can do that. They believe it will not cost nearly as much as what we are projecting. What DWQ is proposing is to put in larger structures that would essentially capture the stormwater runoff from other drainage areas outside of our right-of-way, and then accumulate the credit for reducing the nitrogen within privately held lands. This land might be owned by a local government or some other state and federal agency. In any case, it would be capturing a lot more drainage from facilities other than NCDOT facilities. That's the fundamental difference we have.

Mr. Thorpe indicated that the way hydraulics is currently designed allows a lot of stormwater runoff to flow through our swell or drainage ditch. Since we are in the Neuse River Basin, we are going to have to send the runoff that's coming off our facility through a swell. DWQ traditionally allows us to send the other runoff straight through and have it continue down the swell. In addition, we traditionally do not treat all the runoff that comes from us.

Ms. Szlosberg asked how the runoff that comes into our facility from adjacent properties gets treated. Mr. Thorpe replied that the people that are generating that runoff were not being required to treat it, and we didn't design our system to support the runoff from others.

Mr. Galyon asked if all our systems are designed to take care of what we produce. Mr. Thorpe answered yes.

Mr. Thorpe displayed another slide that depicted individual loading data. He indicated that the yellow line shows the contribution from forestland. He stated that he believes DWQ has essentially

taken that out of the equation because no one can do anything to treat the nitrogen that comes from forested land. What they are looking to do is have a treatment system put in place when forested land is converted to another use. We included forested land here to show what the overall accumulation is from all contributors. The blue line shows local government's contribution, which is essentially those that are in government jurisdictions and includes other state and federal entities other than NCDOT.

So far, the total nitrogen contribution by NCDOT in the Jordan Lake resource is on the order of 1%. That number is based on data that we collected at roughly half a dozen sampling stations within the Piedmont, and is based on hundreds of samples taken at our primary road system. We are currently doing research on our secondary road system as well.

Mr. Thorpe went on to say that we are essentially 1% of the problem according to our cost estimates. If we put in BMP's at all the small drainage's to cover our outfall, it equates to NCDOT bearing 75% of the cost. DWQ disagrees with those estimates based on other options. Mr. Thorpe stated that in his opinion, it would be less expensive to put in fewer larger structures rather than multiple small ones.

Ms. Szlosberg asked if DWQ agreed with his analysis about load contributions. Mr. Thorpe replied that he didn't think that DWQ has any fundamental issues with contribution.

Mr. Galyon asked Mr. Thorpe if he understood him to say that that we produce 1% of the runoff, but they are proposing that we pay for 75% of the total cost.

Mr. Thorpe replied that NCDOT contributes approximately 1% of the nitrogen, not 1% of the total runoff. DWQ's proposed rule would result in NCDOT paying 75% of the total cost. Based on our cost estimates, these estimates are based on the 5-year physical analysis and not based on our 30-year estimates.

Ms. Szlosberg stated that Robin Smith Deputy Secretary of DENR was in attendance, and asked her to respond.

Ms. Smith stated that in response to the specific question about whether we agree with those figures, DENR does not understand how NCDOT came to the conclusion that they would pay for about 78% of the cost contribution. DWQ has not been able to match NCDOT's cost contribution figures to the figures that are included in the fiscal note. Even if DWQ used NCDOT's cost estimates, they do not come up with NCDOT paying anything close to 78% of the cost. So there is a difference of opinion and it is not based on the difference between how many outfalls that need to be controlled. Clearly we do differ about what we think is practical and we are continuing to talk about that. Even if DWQ accepted DOT cost estimates of doing the stormwater controls, we cannot make our figures match what that last bar graph indicated -- that DOT is responsible for 78% of the cost.

Mr. Galyon asked Ms. Smith if she agreed that NCDOT generates 1%. Ms. Smith replied that she would defer to DWQ who could speak to that more specifically. She stated that she certainly can see that NCDOT has a much smaller percentage of the contribution.

Mr. Galyon asked Ms. Smith if she knew what the actual loading percentage is. Ms. Smith answered that the loading is between 6% to 18 % if your looking at NCDOT's percentage of everything that drains to the lake.

Mr. Galyon stated that he was considering only NCDOT property -- not runoff from anything else, and asked what percentage comes from NCDOT roadways. Mr. Thorpe answered that NCDOT we staff estimates between 6% to 6.5 % if your looking at NCDOT percentage of everything that drains into the lake or as much as 18%.

Ms. Smith stated that she would like to defer that question Rich Gannon from DENR's Division of Water Quality.

Mr. Gannon explained that he didn't know where these figures came from so this is new information. DWQ assumed that NCDOT is focusing on the existing development retrofitting cost over the whole span for meeting the retrofitting goals. If we use DWQ's estimates, then the ratios are on the order of NCDOT having 10-15% the cost and local government 85-90%.

Mr. Galyon asked if NCDOT 6% of the problem, why would we have to pay a larger percentage than that? Mr. Gannon answered, clearly we agree it is more costly for NCDOT to treat the same amount of nitrogen and remove it than it is for an average development, primarily because of the linear nature of road facilities and the challenges in having to deal with the lay of the land and the ability to combine the drainage and treat it as cost effective as possible. So it is more costly for NCDOT to treat the drainage. We tried to identify all the potential options to make it cost effective, including trading with other source types. Since NCDOT already receives outside drainage, and you have to work to avoid the drainage co-mingling with yours, it seems like a cost-effective opportunity if the specifics can be worked out. We don't know what that is yet so we would like to discuss it to understand what the restraints are. Another possibility would be to make offset payments to the Ecosystem Enhancement Program (EEP), and allow the EEP to find restoration opportunities around the watershed to help make reductions more cost effective.

Ms. Szlosberg thanked Mr. Gannon for his input and asked that Mr. Thorpe continue his presentation. She stated that she would invite everyone to continue the conversation later in the meeting.

Mr. Thorpe stated it is obvious we need to have some additional conversation. DWQ doesn't understand where we are getting our percentages, and we don't know where they are getting theirs, so we have some issues to be resolved.

Mr. Thorpe did state something in reference to what Mr. Gannon said about co-mingling the drainage. It is true that we can capture the drainage as part of our drainage system, but by that time its part of our system within our right-of-way. When that drainage is within our right-of-way, we then must produce sufficient right-of-way, or put in larger stormwater controls in place over the course of a 25- to 30-year life span, with the majority of that drainage coming from other lands.

Mr. Thorpe then displayed another slide showing nitrogen load per land use and new development loading rates. He indicated that the upper blue dashed line is a numeric target for the Lower New Hope arm of the Jordan Lake. It's the one that's most problematic in respects to the number of nutrients. The yellow line is the Haw River and the red is the Upper New Hope where the limit is 2.2 pounds per acre per year. He stated that NCDOT is currently at 3.2 pounds per acre. The others were well above it. Our estimate is that they are in the neighborhood of 10 pounds. This indicates if everyone has to reduce their contributions by 35% in the Upper New Hope arm, agriculture, local government, and NCDOT can make these reductions and be below the established threshold, but that agriculture and government contribution would still be above those limits. That is another reason why we believe that a straight percentage across the board reduction should be applied, which is more in line with our contribution.

Mr. Galyon asked why adjustments couldn't be made if DWQ prefers to use loading rates. Mr. Thorpe responded that as he mentioned, prior to September 2006 there were numeric targets. Those numeric targets are still an option for new development. But for existing development, we just have this straight across the board percentage. If we had the option of meeting numeric targets for existing development as well, NCDOT would be more comfortable with that. Many of our concerns deal with technical difficulty and cost, but we do have another concerns on the rules. DWQ for the first time in the buffer rules is proposing to allow structural controls in Zone 1 and 2. In Zone 1, it would be allowable. In Zone 2, DWQ would only allow mitigation. So the only opportunity to withhold that runoff would be to put a structural stormwater control in Zone 1, but you also have to a buffer for the stormwater control. We just think that's a bad idea all around. We believe having to obtain a numeric loading target for existing development, in particular, would be a more equitable way of implementing these rules for existing development.

Mr. Betts stated that we have a child's portion of the problem and they want us to pay granddaddy's portion of cost, and that just doesn't seem right. Mr. Thorpe replied that as Ms. Smith pointed out, there is some disagreement about how much of that cost is, but in any case it's greater than what our contribution is.

Mr. Thorpe then displayed another slide showing the loads for phosphorus. He indicated that NCDOT contributes about one-half pound per acre. In addition, local government entities for phosphorus are also low. He states that phosphorus is not quite as difficult to deal with as nitrogen. Phosphorous tends to adhere to soil particles. As you control the soil you control the phosphorus, but if you overload that system, you're going to get more phosphorus.

Mr. Thorpe displayed the next slide showing the location of Jordan Lake, US 64, US 15-501, and the Town of Pittsboro. He indicated that NCDOT has a couple of sampling sites in those locations. This is research that is currently occurring on our secondary road system. The next slide showed a picture of an automatic sampler that NCDOT installed along the edge of the road that collects runoff and sends it to the sampler where it is stored for later analysis. He added that these samplers are spread throughout Piedmont.

Ms. Szlosberg asked Ms. Robin Smith to add her comments.

Robin Smith, DENR's Assistant Secretary for Environment, began by saying that she thinks the struggle for us is trying to manage some wide and different types of sources with various contributions to the nutrient problem. We have problems at both ends of the spectrum. She stated that Mr. Thorpe has described that NCDOT tends to be at one end of the spectrum, and they are a relatively small source. He is correct that it can be more difficult and expensive to get a level of reduction from what is originally a small source. DENR also recognized that they have a mirror image of that problem at the other end. We have municipalities and urbanized area wastewater treatment plants that would not be able to meet an uniformed nutrient-loading target, which seems to be what NCDOT is referring to. If we had a uniform number of pounds per year target for all sources, that would clearly benefit NCDOT because they are already at the low end it, but it would be impossible for the municipalities to meet.

One of the things that DENR is struggling with is how best to address those differences and come out with an overall plan that is equitable to get the level of reductions that are needed to meet other requirements of the legislation, as well as the requirements of the federal Total Maximum Daily Loading (TMDL) requirements. She stated that we obviously have some big gaps right now on the level of contribution from NCDOT, although the bigger gap right now is the cost to NCDOT. As Mr. Thorpe stated, NCDOT has estimated a cost around \$600 million. Ms. Smith stated that she believes DENR's our most recent estimate is down around \$71 million.

At this point a lot of that difference has to do with what would be required from NCDOT to actually meet the rule. A staff meeting has been scheduled to address a number of ideas that DENR thinks would be useful in keeping the cost significantly lower than the worst case scenario of \$600 million. She stated that DENR's DWQ staff does need to talk to NCDOT staff about the practicality of pursuing some of those ideas. We know they have some questions about that and obviously it doesn't do us any good to go forward with the assumption that an approach is possible but not practically available to NCDOT.

We continue to look at those things, but it is clearly not the DENR's goal or desire to have this rule place an undue burden on NCDOT. DENR has identified a number of ways to keep the cost down and some ideas to give NCDOT credit for the things they may already be doing. For example, under the Phase I Stormwater Permit, NCDOT is already required to retrofit right now. That permit does not allow NCDOT to take credit for the retrofit against this rule, which is something DENR hadn't thought of. At the time the permit was written, these rules were in the development process. DENR agreed that it would be appropriate to give NCDOT credit since they are doing retrofits under the existing Phase I Stormwater Permit.

So, in short we are continuing to talk, and we think this will be a productive conversation. There are a lot of good ideas that the DWQ staff has developed already, but it's going to require some more discussion to be sure we fully understand what's feasible. If at the end of the day it looks like there's no way to get those cost down and avoid an extreme burden on NCDOT, we will look at ways to address that. Right now we feel we are too early in those discussions to believe that would be the case.

Mr. Galyon stated that he wants DENR to know and understand that we don't want an adversarial relationship with DWQ. We want to do what is right -- and fair. He stated that it was unfortunate

that the document was released prior to discussions that should have taken place. He also said that he appreciated what Ms. Smith said and fully believes that will take place. NCDOT will continue to collaborate to resolve these issues, and we certainly want to do our fair share.

Ms. Smith replied that DENR recognizes that, and DENR doesn't want an adversarial relationship either. There have been discussions going on for a while at the staff level over cost as the fiscal note was being prepared for the rule. She stated that DENR is certainly sensitive to the issue and is doing what they can to determine what the actual costs are and what the alternatives are for making these nutrient reduction strategies reasonable for DOT.

Ms. Szlosberg stated that she believes the public is sensitive about cost, but they also expect this to happen in some way. She continued that she really appreciates DENR's efforts in this and knows we are all going to work collaboratively to try and figure out solutions. The public expects us to be financially solvent. She thanked all the staff for working on this. She stated that she and Chairman Galyon would like an update on this topic at the August EPPC meeting and requested that everybody come back and give an update on where we are on this discussion.

Ms Szlosberg stated that this is a good transition to our next agenda item that is the Interagency Leadership Team update. She introduced Debbie Barbour, Director Pre-construction.

Ms. Barbour began by stating that the Interagency Leadership Team (ILT) is comprised of individuals from about 10 different state and federal agencies. She stated that the ILT meets quarterly and wanted to update the committee on some of the ILT's goals, the work we've accomplished, and our next steps.

The first goal is to develop a comprehensive shared GIS database. The ILT has requested funding in the Governors budget for the project, but we have not received approval. We are looking at alternatives, and one of the suggestions the team had was to look at all the information various agencies are currently collecting such as wetland streams, and historical information. We want to take the data being processed and put it on the GIS mapping system, and have that information unified so it can be more accurate. In addition, we also continue to receive support from the Rural Planning Organizations and Metropolitan Planning Organizations regarding the need for a comprehensive GIS database. She stated that the ILT is looking at the project to see the kind of savings would actually be achieved if we had good GIS information during the early planning stages.

Our second goal is to link local land use with and long-range transportation planning. This would result in projects that meet mobility, economic, and environmental goals. The team has been closely monitoring and getting updates on the development of the Brunswick County Comprehensive Transportation Plan. The study is currently in the analysis stage of looking at alternatives. That study is supposed to be complete by the end of this year. The team continues to monitor the progress of that study and how the process links land use, transportation and environmental strategic plans into the long-range transportation planning process.

This past March, the ILT held a workshop in conjunction with resource agencies, Metropolitan Planning Organizations, and the Federal Highway Administration to discuss the new requirements



for SAFETEA-LU. SAFETEA-LU now requires coordination with environmental resource agencies in the long-range transportation planning phase to identify environmental issues early in the planning process. This goes back to the goal of linking transportation planning and local land use.

The ILT's third goal is to improve the Merger 01 process. The ILT tasks a team with developing performance measures for the process that would be a gauge for how well the Merger 01 process is performing. Those performance measures have been adopted and approved, and the data on performance measures will be monitored on a yearly basis to determine how effective the process actually is. We will also look at the time frame between when the permit application was submitted and when it is actually received. Ms. Barbour stated that we continuously look for ways to improve the process and track performance.

In conclusion, Ms. Barbour indicated that the team meets quarterly and the next meeting is July 17.

Ms. Szlosberg motioned to adjourn at 9:45 am.